

Application No. 10/608,104
Amendment dated 15 June 2005
Reply to Office Action of 16 March 2005

Page 15 of 20

REMARKS

Claims 1-25, 27-32 and 34-51 are pending after this amendment.

Allowable Subject Matter

The Examiner has indicated that claims 27-32 would be allowable if rewritten in independent form to include all of the limitations of their respective base claims and any intervening claims. The Applicant has done this by amending claims 27, 29 and 30 to incorporate the features of independent claim 26. Claim 28 and claims 31-32 respectively depend from claim 27 and claim 30 and are submitted to be allowable for at least this reason. The Applicant submits that claims 27-32 are now in condition for allowance.

Claims 1-15, 40-42, 46 and 48

The Applicant has amended claims 1, 4, 5 and 7-11. These amendments are submitted to be completely supported by the application as originally filed and to add no new matter.

The Examiner has raised the combination of US patent No. 6,387,156 (Richardson, Jr. et al.) and US patent No. 4,786,295 (Newman et al.) in connection with claims 1-15. The Applicant respectfully submits that claims 1-15 patentably distinguish the combination of Richardson, Jr. et al. and Newman et al.

The Applicant submits that Richardson, Jr. et al. do not disclose or suggest the claim 1 features of "measuring a first rate of air flow in a first location" and "determining an operational state of the system indicative of a desirability for operator intervention based on a comparison of the first flow rate to the at least one first threshold". As discussed in the Office Action, the Examiner agrees that Richardson, Jr. et al. do not suggest these features. The Applicant submits that Newman et al. fail to remedy this deficiency.

As understood by the Applicant, Newman et al. disclose an asbestos filtration device which comprises a housing having an inlet for receiving contaminated air, an outlet for expelling filtered air outside of the housing, a filter, including a HEPA filter, in sealed communication with the inlet, and a blower within the housing for drawing air through the filter means and for expelling the filtered air through the outlet to the outside of the housing.

Application No. 10/608,104
Amendment dated 15 June 2005
Reply to Office Action of 16 March 2005

Page 16 of 20

A control and display system continuously senses differential air pressure and blower speed, converts the differential air pressure and blower speed to an air flow rate value and displays the air flow rate value through a display unit. Manually controllable key pad switches are provided to selectively change the desired air flow rate, to set upper and lower pressure limit values and to set the operating time for system operation. When the system is set to operate at an air flow rate below the maximum air flow rate, the system automatically and continuously maintains the air flow rate at the selected value.

Newman et al. do not disclose or suggest the claim 1 feature of "determining an operational state of the system indicative of a desirability for operator intervention based on a comparison of the first flow rate to the at least one first threshold". The Applicant respectfully submits that the Examiner has misinterpreted the description of Newman et al. in so far as the suggestion that the passage at col. 11, ln. 1-6 of Newman et al. discloses determining the operational state of a system based on the comparison of a flow rate to a threshold. This passage from Newman et al. relates to comparing a sensed pressure value to high and low pressure thresholds. At col. 10, ln. 66-68, Newman et al. clearly disclose periodic checking of "high and low pressure to see if these high and low pressure limits are exceeded." At col. 11, lines 1-6, Newman et al. clearly describe "the CPU checks to see if the low pressure limit is 'exceeded' (decision block 342). The CPU reads the differential pressure value, compares it to either the predetermined low pressure value stored in system read only memory or the low pressure value that is programmed by the operator ...".

Newman et al. disclose displaying the flow rate on a user interface and using the sensed flow rate to automatically control the blower motor voltage, such that the actual air flow rate tracks a desired air flow rate. However, Newman et al. do not disclose the claim 1 feature of "determining an operational state of the system indicative of a desirability for operator intervention based on a comparison of the first flow rate to the at least one first threshold".

More specifically, Newman et al. describe a pressure sensor (212) for sensing the pressure at a particular location in the system (col. 8, ln. 26-44) and for providing a sensed pressure value to the controller (220) (col. 8, ln. 40-57). Newman et al. disclose that these sensed pressure values (along with sensed values of the blower motor voltage) are retained in memory (col. 10, ln. 35-40) and that the CPU may use the sensed pressure values and the sensed blower motor voltage to calculate the air flow rate (col. 10, ln. 39-46 and col. 12,

Application No. 10/608,104
Amendment dated 15 June 2005
Reply to Office Action of 16 March 2005

Page 17 of 20

ln. 4-49). Newman et al. disclose that the calculated air flow rate may be displayed to an operator (col. 10, ln. 46-51) and may be used to automatically control the blower voltage such that the actual air flow rate tracks a desired air flow rate (see col. 11, ln. 35 - col. 12, ln. 3). None of these aspects of Newman et al. disclose or suggest the claim 1 feature of "determining an operational state of the system indicative of a desirability for operator intervention based on a comparison of the first flow rate to the at least one first threshold".

Based on this reasoning, the Applicant respectfully submits that neither Richardson, Jr. et al. nor Newman et al. disclose the claim 1 feature of "determining an operational state of the system indicative of a desirability for operator intervention based on a comparison of the first flow rate to the at least one first threshold". Accordingly, claim 1 is submitted to patentably distinguish the combination of Richardson, Jr. et al. and Newman et al. Claims 2-15 depend from claim 1 and are submitted to patentably distinguish the combination of Richardson, Jr. et al. and Newman et al. for at least this reason.

The Applicant has added new claims 40-42, 46 and 48 which depend from claim 1. Claims 40-42, 46 and 48 are submitted to be completely supported by the application as originally filed and to add no new matter. The Applicant respectfully submits that claims 40-42, 46 and 48 further patentably distinguish the prior art of record.

Claims 16-25, 43-45, 47 and 49-50

The Applicant has amended claims 16 and 19-24. These amendments are submitted to be completely supported by the application as originally filed and to add no new matter.

The Examiner has raised the combination of Richardson, Jr. et al. and Newman et al. in connection with claims 16-25. The Applicant respectfully submits that claims 16-25, as amended, patentably distinguish the combination of Richardson, Jr. et al. and Newman et al.

The Applicant submits that Richardson, Jr. et al. do not disclose or suggest the claim 16 features of "a first sensor for generating a first signal indicative of a flow rate of the airflow in a first location" and "a comparator configured to receive the first signal and to compare the flow rate of the airflow in the first location to at least one threshold to determine an operational state of the system indicative of a desirability for operator intervention". As discussed in the Office Action, the Examiner agrees that Richardson, Jr. et al. do not suggest these features. The Applicant submits that Newman et al. fail to remedy this deficiency.

Application No. 10/608,104
Amendment dated 15 June 2005
Reply to Office Action of 16 March 2005

Page 18 of 20

The Applicant respectfully submits that the Examiner has misinterpreted the disclosure of Newman et al. in so far as the suggestion that the passage at col. 11, ln. 1-6 of Newman et al. disclose a comparator for comparing a measured flow rate to a flow rate threshold to determine an operational state of a system. As discussed above in relation to claim 1, this passage from Newman et al. relates to comparing a sensed pressure value to high and low pressure thresholds.

As discussed above in relation to claims 1-15, Newman et al. disclose sensing pressure and converting this pressure to a flow rate. Newman et al. disclose displaying the flow rate on a user interface and using the sensed flow rate to automatically control the blower motor voltage, such that the actual air flow rate tracks a desired air flow rate. However, Newman et al. do not disclose "a comparator configured to receive the first signal and to compare the flow rate of the airflow in the first location to at least one threshold to determine an operational state of the system indicative of a desirability for operator intervention".

Based on this reasoning, the Applicant respectfully submits that neither Richardson, Jr. et al. nor Newman et al. disclose the claim 16 feature of "a comparator configured to receive the first signal and to compare the flow rate of the airflow in the first location to at least one threshold to determine an operational state of the system indicative of a desirability for operator intervention". Accordingly, claim 16 is submitted to patentably distinguish the combination of Richardson, Jr. et al. and Newman et al. Claims 17-25 depend from claim 16 and are submitted to patentably distinguish the combination of Richardson, Jr. et al. and Newman et al. for at least this reason.

The Applicant has added new claims 43-45, 47 and 49-50 which depend from claim 16. Claims 43-45, 47 and 49-50 are submitted to be completely supported by the application as originally filed and to add no new matter. The Applicant respectfully submits that claims 43-45, 47 and 49-50 further patentably distinguish the prior art of record.

Claims 34-38

The Applicant has amended claim 34. This amendment is submitted to be completely supported by the application as originally filed and to add no new matter.

Application No. 10/608,104
Amendment dated 15 June 2005
Reply to Office Action of 16 March 2005

Page 19 of 20

The Office Action does not formally address claims 34-38. The Applicant believes, on the basis of a 25 May 2005 telephone conference with the Examiner, that the Examiner intended to raise Newman et al. in connection with claims 34-38.

The Applicant respectfully submits that claims 34-38, as amended, patentably distinguish Newman et al. More particularly, claim 34, as amended, recites "a replaceable filtration element located in a path of the airflow between the inlet and the outlet, the filtration element comprising a memory device for storing information indicative of a remaining capacity of the filtration element." Newman et al. fail to disclose or suggest such a feature. At col. 10, ln. 51-58, Newman et al. describe the use of a timer which keeps track of operating time of the blower motor. However, this timer is an "internal counter or timer within the CPU" and is not a part of a filtration element as recited in claim 34.

For this reason, claim 34 is submitted to patentably distinguish Newman et al. Claims 35-38 depend from claim 34 and are submitted to patentably distinguish Newman et al. for at least this reason.

Claim 39

The Examiner has raised the combination of Richardson, Jr. et al. and Newman et al. in connection with claim 39. The Applicant respectfully submits that claim 39 patentably distinguishes the combination of Richardson, Jr. et al. and Newman et al.

The Applicant submits that Richardson, Jr. et al. do not disclose or suggest the claim 39 features of "means for detecting a flow rate of the airflow" and "means for determining an operational state of the system indicative of a desirability for operator intervention based at least in part on the detected flow rate". As discussed in the Office Action, the Examiner agrees that Richardson, Jr. et al. do not suggest these features. The Applicant submits that Newman et al. fail to remedy this deficiency.

As discussed above, Newman et al. disclose sensing pressure and converting this pressure to a flow rate. Newman et al. disclose displaying the flow rate on a user interface and using the sensed flow rate to automatically control the blower motor voltage such that the actual air flow rate tracks a desired air flow rate. However, Newman et al. do not disclose "means for determining an operational state of the system indicative of a desirability for operator intervention based at least in part on the detected flow rate".

Application No. 10/608,104
Amendment dated 15 June 2005
Reply to Office Action of 16 March 2005

Page 20 of 20

Based on this reasoning, the Applicant respectfully submits that neither Richardson, Jr. et al. nor Newman et al. disclose the claim 39 feature of "means for determining an operational state of the system indicative of a desirability for operator intervention based at least in part on the detected flow rate". Accordingly, claim 39 is submitted to patentably distinguish the combination of Richardson, Jr. et al. and Newman et al.

Claim 51

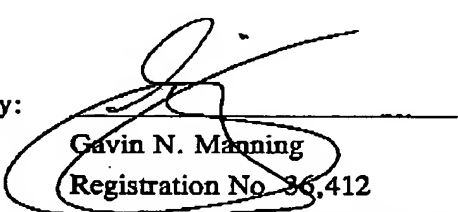
The Applicant has added new claim 51. New claim 51 is submitted to be completely supported by the application as originally filed and to add no new matter. The Applicant submits further that new claim 51 patentably distinguishes the prior art of record.

Conclusions

The Applicant submits that this application is now in condition for allowance and respectfully requests reconsideration and allowance of this application in light of the foregoing amendments and comments.

Respectfully submitted,
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